

**IV. Remarks**

Claims 1-3, 7, 9, 11, 12, 16, 18-20, 22, 25, and 27 are pending and rejected. Applicants thank Examiner Reichle for the case interview conducted telephonically on April 21, 2008. Based on discussions during the case interview, specification paragraphs [0006], [0010], [0036], and [0067], as well as the abstract and claims 1, 19, and 27 have been amended. With the amendments and remarks provided herewith, the Applicants respectfully request reconsideration and a withdrawal of all objections and rejections to the pending claims.

Moreover, each of claims 1, 19, and 27 has been amended to recite that the valve body is compressed only along the peripheral edge parallel to the second height dimension when the valve body is received by the recess. More specifically, claims 1 and 27 recite that the valve body is compressed along the “entire peripheral edge parallel to the second height dimension.” Further, claim 27 has been amended to recite that the valve body is an oblong shape and the peripheral edge includes a pair of parallel planar surfaces perpendicular to at least one of the slits. Claim 27 further recites that the planar surfaces allow the valve body to expand in the width direction without interacting with the recess. Lastly, claim 27 has been amended to recite that the compression produces a closing force on “the entire length of one of the slits.” Support for these amendments may be found in paragraphs [0040], [0041], [0042], [0045], [0051], [0054], [0065], and Figs. 1, 2, 10, and 12 of the present application as originally filed. Thus, no new matter has been added.

*Objections to the Specification*

Responsive to the objections to the specification based on informalities in paragraph [0036] of the present application, paragraph [0036] has been amended on line 3 to read “housing member or member 12 including a passage” and lines 4-5 to read “Housing member 12 has an abutting surface 13.” Support for these amendments may be found in paragraphs [0036] and Figs. 2, 10, and 12 of the present application as originally filed. Thus, no new matter has been added.

Further, paragraphs [0006], [0010], [0067], and the abstract have been amended to consistently recite the relationship between the valve body the housing member, and the passage in accordance with the claims and amended paragraph [0036]. For example, paragraph [0006] has been amended on lines 2-3 to read “a housing having a housing member with a passage” and line 4 to read “valve body is mounted in the housing and abuts the housing member at an end of the passage.” Similarly, paragraph [0010] has been amended on lines 2-3 to read “valve body is....mounted in the housing so as to abut the housing member at an end of the passage” and line 7 to read “valve body is mounted in the housing.” Further, paragraph [0067] has been amended on line 5 to read “passage 11 of the housing member 12.” The abstract has been amended on line 1 to read “housing having a housing member with a passage” and line 3 to read “valve body is mounted in the housing and abuts the housing member at an end of the passage.” Support for these amendments may be found in paragraphs [0036] and Figs. 2, 10, and 12 of the present application as originally filed. Thus, no new matter has been added.

*Claim Rejections – 35 U.S.C. § 112*

Responsive to the rejections of claims 1-3, 7, 9, 11-12, 16, 18-20, 22, 25, and 27 under 35 U.S.C. § 112, first paragraph, the Applicants assert that the claims contain subject matter which is described in the specification of the present application as filed in such a way as to reasonably convey to one skilled to which it pertains. For example, amended claim 1 recites a “housing member having a passage” rather than a housing. Support for such terminology may be found in paragraph [0036] of the present application. As recited in paragraph [0036], the “valve body 1 is received into recess 18 and is sandwiched or disposed between sections of wall 19 and cap 17 and abuts housing member 12.” Moreover, housing member 12 is clearly shown in the drawings as originally filed, particularly in figures 1, 2, and 16 of the drawing. Thus, the claims and the specification have been amended to more clearly and consistently recite the relationship between the valve body, the housing member, and the passage.

Moreover, claims 1, 19, and 27 have been amended to more clearly define the relationship between the recess and the valve dimensions. For example, claims

1 and 19 have been amended to read “the recess being defined by a first height dimension and a first width dimension...the valve body having a second height dimension and a second width dimension....the second height dimension being greater than the first height dimension of the recess and the second width dimension being less than the first width dimension of the recess” as opposed to the second height and second width dimensions being “unequal to recess dimension.” Support for these amendments may be found in paragraphs [0041], [0045], [0051], [0065], and Fig. 2 of the present application as originally filed. Thus, no new matter has been added.

Further, claims 1, 19, and 27 have been amended to more clearly define the relationship between the compression force and the valve body. For example, claims 1 and 27 now recite “the valve body configured to be compressed only along the entire peripheral edge parallel to the second height dimension,” and claim 19 has been amended in accordance with the Examiner’s suggested language to read “the valve body configured to be compressed only along the peripheral edge parallel to the second height dimension” as opposed to “compressed only along the height dimension.” Support for these amendments may be found in paragraphs [0039], [0041], [0051], [0065], and Figs. 2, 10, and 12 of the present application as originally filed. Thus, no new matter has been added.

In addition, the Applicants note that the valve body is “compressed only along the peripheral edge parallel to the second height” as now recited in amended claims 1, 19, and 27. The Examiner misinterprets the term “sandwiched” in paragraph [0036] to be interchangeable with the term “compressed.” However, the term “sandwiched”, as defined by the Merriam-Webster online dictionary, means “to insert or enclose between usually two things of another quality or character; to make a place for – often used with *in* or *between*.” Accordingly, paragraph [0036] has been amended to more clearly define the term “sandwiched” and reads “valve body is....sandwiched or disposed between” the cap and the housing member when received into the recess. Thus, the valve body is “disposed between” the cap and the housing member and is “compressed only along the peripheral edge parallel to the second height dimension.” Sufficient support for this limitation is found in paragraphs [0041], [0051], and [0065] of the present application as originally filed.

Moreover, responsive to the rejection of claim 27 reciting a closing force on the slits, claim 27 has been amended to recite a closing force on “one of the slits” as opposed to “the slits.” Support for this amendment may be found in paragraphs [0047], [0054], and [0065] of the present application as originally filed. Thus, no new matter has been added.

*Claim Rejections – 35 U.S.C. § 103*

Responsive to the rejections of claims 1-3, 7, 9, 11-12, 16, 18, and 27 under 35 U.S.C. § 103 as being unpatentable over the combinations of Matsumoto et al. '665 (*Matsumoto*) with each of Dudar et al. '394 (*Dudar*), Picha et al. '654 (*Picha*), Muto '548 (*Muto*), Spademan '127 (*Spademan*), and Shimonaka et al. '679 (*Shimonaka*) each combination mentioned above does not teach each and every element of the claimed invention or is improper to combine. For example, claim 1 (and similarly claims 19 and 27) recites that the valve body is “compressed only along the peripheral edge parallel to the second height dimension when the valve body is received by the recess.” Further, claims 1 and 27 recite that the valve body is “compressed only along the entire peripheral edge parallel to the second height dimension.” Moreover, claim 27 recites that “the peripheral edge includes a pair of planar surfaces perpendicular to at least one of the slits” and that the compression produces “a closing force on the entire length of one of the slits.” Each of the combinations of *Matsumoto* and *Dudar*, *Matsumoto* and *Picha*, *Matsumoto* and *Muto*, *Matsumoto* and *Spademan*, and *Matsumoto* and *Shimonaka* fails to teach such claimed limitations of claims 1, 19, and 27.

First, *Matsumoto* and each of the secondary references combined therewith do not describe a valve body configured to be compressed only along the peripheral edge parallel to the second height dimension when the valve body is received by the recess. Furthermore, *Matsumoto* and each of the secondary references combined therewith do not describe a valve body having a peripheral edge which includes a pair of planar surfaces perpendicular to at least one of the slits, the planar surfaces allowing the valve body to expand in the width dimension without interacting with the recess when the valve body is received by the recess.

Contrarily, in *Matsumoto*, the valve body is clamped between the main body and the cap and, as a result, the valve body is compressed along the thickness rather than the second height dimension (or height). Therefore, *Matsumoto* does not disclose a valve body configured to be compressed only along the peripheral edge parallel to the height dimension when received by the recess. In fact, more than likely, the height dimension of the valve body in *Matsumoto* would be expanded rather than compressed when the valve body thickness is compressed. This is contrary to the claimed invention, i.e., “the valve body configured to be compressed only along the peripheral edge parallel to the second height dimension when the valve body is received by the recess.”

Furthermore, none of the secondary references mentioned above teaches “the valve body configured to be compressed only along the peripheral edge parallel to the second height dimension when the valve body is received by the recess.” For example, *Dudar* teaches a housing 40 having a tapered internal surface 60 which applies radially directed forces to the septum 52 as well as end members 58 which apply axial forces to the septum 52. (*Dudar*, col. 7, lines 39-45.) Thus, *Dudar* teaches a septum configured to be compressed in both radial and axial directions and does not teach or suggest a valve body configured to be compressed only along the peripheral edge parallel to the height dimension.

As for *Picha*, *Picha* teaches a cylindrical tapered plug 21 which is pressed into the “correspondingly tapered” access port 13 to achieve radial compression. (*Picha*, col. 3, lines 6-20 and lines 31-33.) Hence, due to the tapered cylindrical shape of the plug 21 and the correspondingly tapered access port 13, the compression force in *Picha* is applied radially around the entire plug 21 rather than only along the peripheral edge parallel to the height dimension.

Further, *Muto* teaches a foam body 31 which is compressed both radially and axially. (*Muto*, col. 2, lines 59-68.) Thus, *Muto* fails to teach or suggest a valve body configured to be compressed only along the peripheral edge parallel to the height dimension.

As for *Spademan*, *Spademan* teaches a sealing member 10 subject to a first force generally along a first axis a and a second force of different magnitude along a

second axis b in a plane substantially normal to the thickness of member 10. (*Spademan*, col. 3, ll. 17-23; see also Figures 4d-7d.) Hence, *Spademan* teaches a sealing member compressed by two different forces along two different directions and does not teach or suggest a valve body configured to be compressed only along the peripheral edge parallel to the height dimension.

Further, *Shimonaka* teaches a plug 11 which is pressed only at the central portion of the slit 33 only in a direction perpendicular to the slit 33 (i.e., only along a central portion of the peripheral edge. The slit 33 is pressed only at the central portion so that there is no possibility of disturbing insertion of medical instruments. (*Shimonaka*, col. 3, lines 40-42, 48-52, col. 4, lines 6-10, and Figs. 6 and 8 (emphasis added)). This is contrary to the claimed invention recited in claim 1, which recites a “valve body configured to be compressed only along the entire peripheral edge parallel to the height dimension,” and claim 27, which recites a compression force “on the entire length of one of the slits” (emphasis added). Thus, the valve body as claimed in the present invention is compressed such that the entire length of the slit is compressed as opposed to only the central portion of the slit being compressed as taught by *Shimonaka*.

Moreover, the combinations of *Matsumoto* and *Spademan* and *Matsumoto* and *Shimonaka* are improper. As mentioned above, *Matsumoto* teaches the valve body being clamped between the main body and the cap, thereby compressing the thickness rather than the height dimension of the valve body. More than likely, the height dimension of the valve body in *Matsumoto* would be expanded rather than compressed when the valve body thickness is compressed. On the other hand, *Spademan* teaches away from *Matsumoto*, i.e., *Spademan* solves a similar sealing problem by generating a first force of a given magnitude generally along a first axis a and a second force of different magnitude along a second axis b in a plane substantially normal to the thickness of member 10. (*Spademan*, col. 3, ll. 17-23; see also Figures 4d-7d.)

Similarly, *Shimonaka* teaches away from *Matsumoto*, i.e., *Shimonaka* solves a similar sealing problem by generating a compression force only at the central portion of the slit only in a direction perpendicular to the slit. (*Shimonaka*, col. 3,

lines 40-42, 48-52, col. 4, lines 6-10, and Figs. 6 and 8). Thus, pressing *only in a direction perpendicular to the slit* teaches away from compressing the thickness of a valve body, as taught by *Matsumoto*, which would likely cause the valve body to expand in a direction perpendicular to the slit.

As for claims 2-3, 7, 9, 11, 12, 16, and 18, these claims depend generally on independent claim 1. Thus, claims 2, 3, 7, 9, 11, 12, 16, and 18 are allowable for the reasons provided above.

Responsive to the rejections of claims 19, 20, 22, and 25 under 35 U.S.C. §103 as being unpatentable over the combination of Behnke et al. '034 (*Behnke*) and Thomas et al. '463 (*Thomas*), the combination fails to teach or suggest each and every element as recited in the present application as claimed. For example, claim 19 recites a valve body “configured to be compressed only along the peripheral edge parallel to the second height dimension.”

Contrarily, in *Behnke*, the septum 22 includes a generally constant diameter cylindrical portion 38 which is compressed radially by the housing 16 when the septum 22 is received by the septum-receiving portion 21 which also has a generally constant diameter. (*Behnke*, col. 2, lines 24-33, 51-55, col. 3, lines 1-10). Since the cylindrical portion 38 of the septum 22 has a generally constant diameter and is received within and compressed by a septum-receiving portion of a housing also having a generally constant diameter, the radial compression must be along the entire perimeter rather than “only along the peripheral edge parallel to the second height dimension” as recited in the claimed invention.

Furthermore, *Thomas* fails to cure the deficiencies of *Behnke* as “a substantial amount of pressure is applied uniformly about the periphery of the valve element.” (*Thomas*, col. 4, lines 39-48). While *Thomas* teaches applying a radial compressive force along the major axis of an oval shaped valve member, *Thomas* also teaches applying a radial compressive force along the minor axis (*Thomas*, col. 4, lines 63-68) contrary to the claimed invention which claims compression “only along a peripheral edge parallel to the second height dimension.”

As for dependant claims 20, 22, and 25, these claims generally depend from claim 19. Thus, claims 20, 22, and 25 are allowable for the reasons provided above.

Conclusion

In view of the above amendments and remarks, it is respectfully submitted that the present form of the claims (claims 1-3, 7, 9, 11, 12, 16, 18-20, 22, 25, and 27) are patentably distinguishable over the prior art and that this application is now in condition for allowance. Such action is respectfully requested.

Respectfully submitted,

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Date

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